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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,247	07/09/2003	John F. Schabron	WRJStirrerCIP	2847
33549	7590	09/22/2006	EXAMINER	
SANTANGELO LAW OFFICES, P.C. 125 SOUTH HOWES, THIRD FLOOR FORT COLLINS, CO 80521			MOSS, KERI A	
			ART UNIT	PAPER NUMBER
			1743	
DATE MAILED: 09/22/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/617,247		SCHABRON ET AL.	
	Examiner		Art Unit	
	Keri A. Moss		1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/5/03, 7/9/03, 10/16/03</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 199(e) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/131648, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Claims 1-67 are not adequately supported or enabled by the provisional application 60/131648 because it does not disclose or suggest the following elements: 1) an interchangeable stir element, 2) a user detachable connection element, 3) a multidirectional restraint, 4) a rounded bar stir implement, 5) a gentle displacer stir implement, 6) a speed regulator, 7) a voltage regulator, 8) a circuit, 9) cleaning the shaft element, rotationally configured stir implements and cyclindrical container, or 10) decontaminating the motor and enclosing element.

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The disclosure of the prior-filed application, Application No. 09/558,979, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Claims 1-67 are not adequately supported or enabled by the provisional application 09/558,979 because it does not disclose or suggest the following elements: 1) an interchangeable stir element, 2) a user detachable connection element, 3) a multidirectional restraint, 4) a rounded bar stir implement and 5) a gentle displacer stir implement.

Drawings

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the 1) user detachable connection element, 2) speed regulating element, 3) magnetic coupling of the shaft element and the motor, and 4) voltage regulating element must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

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is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said cylindrical container" in line 11. There is insufficient antecedent basis for this limitation in the claim. Claims 1-35 are rejected as dependent on claim 1.

Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See

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MPEP § 2172.01. The omitted structural cooperative relationships are: it is unclear where is the soil sample in relation to the other structural elements? Where is the test substance in relation to the other structural elements? Claims 36-67 are rejected because they are dependent on claim 36.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims **1-22, 25-47, 51-67** are rejected under 35 U.S.C. 103(a) as being unpatentable over AT-ONSITE Environmental Conference 1996 slides presented on "Field Screening for Soil Fuel Contamination with UV Absorbance and Fluorescence" (hereinafter "field soil screening slides") in view of AT-ONSITE Environmental Conference 1996 slides presented of Stirrer Device (hereinafter "stirrer slides") and further in view of Chester (USP 2203672).

The field soil screening slides disclose a method of testing soil for fuel contamination by collecting soil in a jar, performing extraction soil such as clay, sand, silt or potting soil; adding an alcohol; optionally adding a drying agent such as calcium oxide; inducing a color change reaction and analyzing the reaction by UV spectrometry, Fluorescence or Gas Chromatography.

The field soil screening slides do not teach an apparatus with which to emulsify the soil during the field testing. The stirrer slides presented at the same conference show a field testing device comprising a jar, a stir implement, a motor operating the stirrer, and a power source. There appears to be a seal separating the contents of the jar from the motor. The jar, stir implement and motor are detachable from each other. The blade of the stir implement is an angularly displaced circular element. The jar, stir implement and motor are cylindrically shaped and have a cylindrically aligned exterior. The stirrer device disclosed in the stirrer slides inherently has a multidirectional restraint as the blade would not turn without it.

The field soil screening slides teach mixing soil in a jar. The stirrer slides disclose a device used for mixing in a jar. The stirrer device shows the advantage of providing a portable power source for the motor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the method taught in the field soil screening slides with the device disclosed in the stirrer slides in order to gain the advantages of a device that stirs materials in the field in order to use the device for extended periods of time without running out of power.

Neither the field soil screening slides nor the stirrer slides expressly teach interchangeable rotationally configured stir implements. However, interchangeable blades are notoriously well known among those with ordinary skill in the art. Chester (USP 2,203,672) teaches a device with interchangeable blades (Figures 1-6). Chester also teaches a user detachable connection element (part 24) connecting the stir implements to the shaft element (part 21). Chester teaches that the different blades are useful for mixing solutions comprised of liquids and solids. Therefore, it would have been obvious for one of ordinary skill in the art to modify the stirring device of the stirrer slides with interchangeable stir implements as disclosed by Chester in order to gain the advantages of mixing solutions containing liquids and solids.

9. Claims **23-24** and **48-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klicks (USP 4,534,656). Neither the field soil screening slides nor the stirrer device slides expressly teach a magnetic clutch assembly. However, magnetic clutch assemblies are well known among those with ordinary skill in the art.

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Klicks discloses a stirring device with a magnetic clutch assembly (column 2 lines 42-65) that forms a seal between the container and the motor (column 1 lines 34-39).

Klicks teaches that the benefits of the magnetic clutch assembly are that it avoids vibration of the apparatus (column 1 lines 34-45). Therefore, it would have been obvious to one of ordinary skill in the art to combine the stirrer device of the device slides with the magnetic clutch assembly from Klicks in order to gain the advantages of minimizing vibration of the apparatus during stirring.

10. Claims **1-22, 25-31, 33-48, 51-58 and 61-62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schabron (USP 5,561,065) in view of McCauley (USP 4,832,501). Schabron discloses a method for testing organic contaminants in soil comprising selecting a soil sample (column 3 lines 37-57); selecting and adding a suitable organic contaminant test substance (column 3 lines 58-60); putting the sample into a cylindrical container (column 3 lines 37-57); stirring the sample with a mechanical mixer (column 1 lines 58-67), or a magnetic stirrer (column 7 lines 54-56); stirring the soil testing sample to create an extraction sample (column 3 line 58-67); analyzing the extraction to determine presence of organic contaminant (column 4 lines 1-8).

Schabron teaches testing soil samples such as sand, which inherently comprises small rocks; silt; clay; or potting soil, which inherently contains stringy plant material (column 7 lines 36-39). An analysis of the extraction sample can be done with UV absorption spectroscopy, visible absorption spectroscopy, fluorescence spectroscopy (column 5 line 45-column 6 line 45). The organic contaminant test substance can be alcohols,

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aliphatic hydrocarbons, aromatic hydrocarbons (column 5 lines 10-38). The organic contaminant tested for includes diesel, tar, motor oil, fuel oil, coal (column 5 lines 10-19). This method may further comprise selecting a drying element and adding it to the soil sample (column 4 lines 26-67). The drying element may be calcium oxide (column 4 lines 51-67). The soil may be enclosed in a jar with a jar cover (column 7 lines 17-20). This method inherently teaches screening to remove larger items from the soil sample as larger items would not fit into the mason jar cylindrical container. A mason jar is inherently made of glass.

Schabron does not disclose the details of the mechanical mixer used to mix the soil with the organic contaminant test substance, with the exception of teaching a mechanical or magnetic stirrer. McCauley discloses a mechanical mixer with axially restrained interchangeable rotationally configured stir implements with a shaft element suitable used in a cylindrical container (Fig. 2-Fig. 5D). The interchangeable stir implements are detachable and restrained multi-directionally (Fig. 2). A The mixer is powered by a motor that is sealed from the sample (Fig. 2 part 30) and that controls the shaft element (Fig. 2). Stirring takes place by axial displacement of the stir implements (Fig. 2). The sample is divergently displaced, sheared, or gently displaced by one of the stir implements (Figs 5A-5D) in combination with controlling the speed of stirring (column 4 line 43- column 5 line 48). The height of the stir implements can be adjusted (column 1 lines 61-63). The stirring piece rotates with the turning of the motor driven shaft (column 1 lines 64-65). The stirring device further comprises a clutch assembly (Fig. 2). The shaft element can be continuously rotated and the speed of the motor may

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be regulated (column 4 line 43- column 5 line 48) and the voltage to which the shaft element is responsive can be regulated (column 4 lines 43-51) and the motor may be powered by a battery (column 4 lines 43-51) and therefore inherently comprises a circuit. The speed may remain constant or variable (column 4 line 43- column 5 line 48). The motor is housed in a cylindrical casing (Fig. 2). The cylindrical encasing, container and a removable enclosing element (Fig. 3 part 45) are aligned. The stir implements include a rounded bar element (Fig. 5E), an angularly displaced circular element (Fig. 5C), an angularly displaced linear element (Fig. 5B), a divergent displacer element (Fig. 5D) and a gentle displacer element (Fig. 5A).

McCauley teaches that an advantage to this particular stirring device is that it is motorized and adapted to be mounted to and stir the contents of a container.

Therefore, it would have been obvious for one of ordinary skill in the art to combine the method of Schabron with the mixing apparatus of McCauley in order to gain the advantages of a motorized mixer that mounts to and stirs the contents of a container.

Regarding claims **8-15**, McCauley and Schabron do not specifically give guidance for which stir implement to use with the different types of soil disclosed in McCauley, however, it would have been obvious to one of ordinary skill in the art to use each stir implement with each type of soil.

Regarding claim **35**, McCauley and Schabron do not specifically instruct the user to clean the shaft and parts of the apparatus that become soiled during use. However, it would have been obvious to one of ordinary skill in the art to clean the apparatus and

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decontaminate it after each use so as to not contaminate the next sample, which would cause erroneous results.

11. Claims **23-24, 32, 49-50 and 63-67** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schabron and McCauley as applied to claims 1-22, 25-48, 51-58 and 61-62 above and further in view of Klicks (USP 4,534,656). Schabron and McCauley do not expressly disclose a magnetic clutch assembly. Klicks discloses a stirring device with a magnetic clutch assembly (column 2 lines 42-65) that forms a seal between the container and the motor (column 1 lines 34-39). The apparatus includes a removable enclosing element (Fig. 2, parts 19, 20 and 21) encasing the motor and magnetic clutch assembly (Fig. 2). The cylindrical removable enclosing element, cylindrical container and magnetic clutch are aligned cylindrically from top, middle and bottom, respectively, forming a coaxial arrangement. Klicks teaches that the benefits of the magnetic clutch assembly are that it avoids vibration of the apparatus (column 1 lines 34-45). Therefore, it would have been obvious for one of ordinary skill in the art to modify the combined method and apparatus of Schabron and McCauley with the apparatus of Klicks in order to gain the additional advantages of minimizing the vibration of the apparatus.

12. Claims **59-60** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schabron, McCauley and Klicks and further in view of Kobayashi (USP 5,236,018). Schabron, McCauley and Klicks do not disclose the material with which the cylindrical encasing or the cylindrical removable enclosing element are made. However, it would

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have been obvious to one of ordinary skill in the art to make these elements with materials that are resistant to the chemicals and the conditions with which they come into contact during use. The materials that would be suitable for use in testing soil samples containing fuels, oils, coal and tar are notoriously well known in the art. Kobayashi teaches that polypropylene, polyphenylene sulfide and polyethylene are suitable materials with resistance to corrosive materials (column 2 lines 41-55; column 5 lines 47-61). Therefore, it would have been obvious to one of ordinary skill in the art to use the materials disclosed in Kobayashi to make the apparatus of combined applications Schabron, McCauley and Klicks in order to gain the advantages of using a material that is resistant to corrosive chemicals.

Conclusion

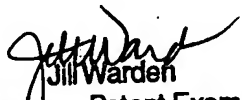
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keri A. Moss whose telephone number is 571-272-8267. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAM 9/15/06


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